BookletChart™

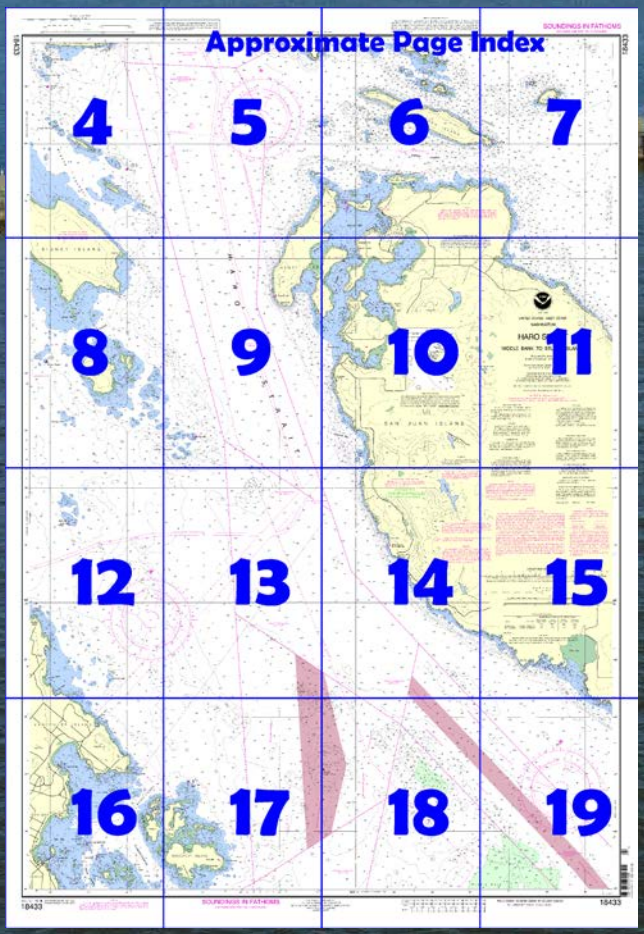
Haro Strait – Middle Bank to Stuart Island

NOAA Chart 18433

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

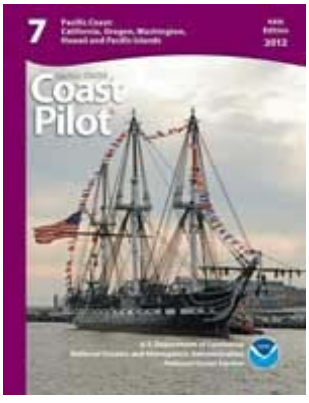
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18433.



(Selected Excerpts from Coast Pilot)
The waters of the **San Juan Islands** embrace the passages and bays N of the E end of the Strait of Juan de Fuca. These passages are used extensively by pleasure craft, especially in July, August, and September. Some tugs and barges use the larger passes. Automobile ferries, operated by the State of Washington, are on regular round-trip runs from Anacortes through Thatcher Pass, Harney Channel, Wasp Passage, San Juan Channel, Spieden Channel, and across Haro Strait to Sidney, B.C. The island ferry landings are at Upright Head, Lopez Island; on the E side of the entrance to Blind Bay, Shaw Island; Orcas, Orcas Island; and Friday Harbor, San Juan Island. Oceangoing vessels normally use Haro and Rosario Straits and do not run the channels and passes in the San Juan Islands. Many resorts and communities have supplies and moorage available for the numerous pleasure craft cruising in these waters. Well-sheltered anchorages are numerous. The directions which follow are intended for use only in clear weather; in thick weather or at night strangers should take a pilot for large vessels. Small craft should not attempt navigation under these conditions without local knowledge. Sailing craft should not attempt the passages against the current unless the wind is fair and fresh. A reliable auxiliary engine for sailboats is an absolute necessity. The tidal currents have great velocity in places, causing heavy tide rips that are dangerous. Because of the variable direction and velocity of the currents, compass courses are of little value, and, where followed, allowance must be made for the set of the current.

Haro Strait and **Boundary Pass** form the westernmost of the three main channels leading from the Strait of Juan de Fuca to the SE end of the Strait of Georgia; it is the one most generally used. Vessels bound from the W to ports in Alaska or British Columbia should use the Haro Strait/Boundary Pass channel, as it is the widest channel and is well marked. Vessels bound N from Puget Sound may use Rosario Strait or Haro Strait; the use of San Juan Channel by deep-draft vessels is not recommended. In accordance with the Cooperative Vessel Traffic Service, the United States and Canada, in cooperation with industry and British Columbia Coast Pilots, have established a **Special Operating Area** at the intersection of Haro Strait and Boundary Pass in the vicinity of Turn Point Light (48°41'18"N., 123°14'12"W.). This special area will help reduce the risk of incidents between commercial and recreational vessels transiting the boundary waters of Haro Strait and Boundary Pass. For the boundaries and rules regarding the **Special Operating Area,** see **Cooperative Vessel Traffic Service (CVTS)** at the beginning of this chapter.

Tidal currents.–In Haro Strait and Boundary Pass, the flood current sets N; the ebb current sets in the opposite direction. The ebb usually runs longer and has a greater velocity. At the N entrance to Boundary Pass, the flood sets E along the N and S sides of Sucia Islands and across Alden Bank; the velocity is about 1 to 2 knots. The Current has moderate velocity between Sucia and Orcas Islands. There is a large, daily inequality in the current (see Tidal current Tables for predicted times and velocities). Heavy, dangerous tide rips occur between East Point on Saturna Island and Patos Island, and for two miles N in the Strait of Georgia. Tide rips also occur on the ebb between Henry Island and Turn Point, as well as around Turn Point where the ebb may attain a velocity of 6 knots during large tides. The flood current sets E from Discovery Island across the S end of Haro Strait until close to San Juan Island. This E set especially noticeable during the first half of the flood. Heavy tide rips occur N of Middle Bank and on the Bank and around Discovery Island.

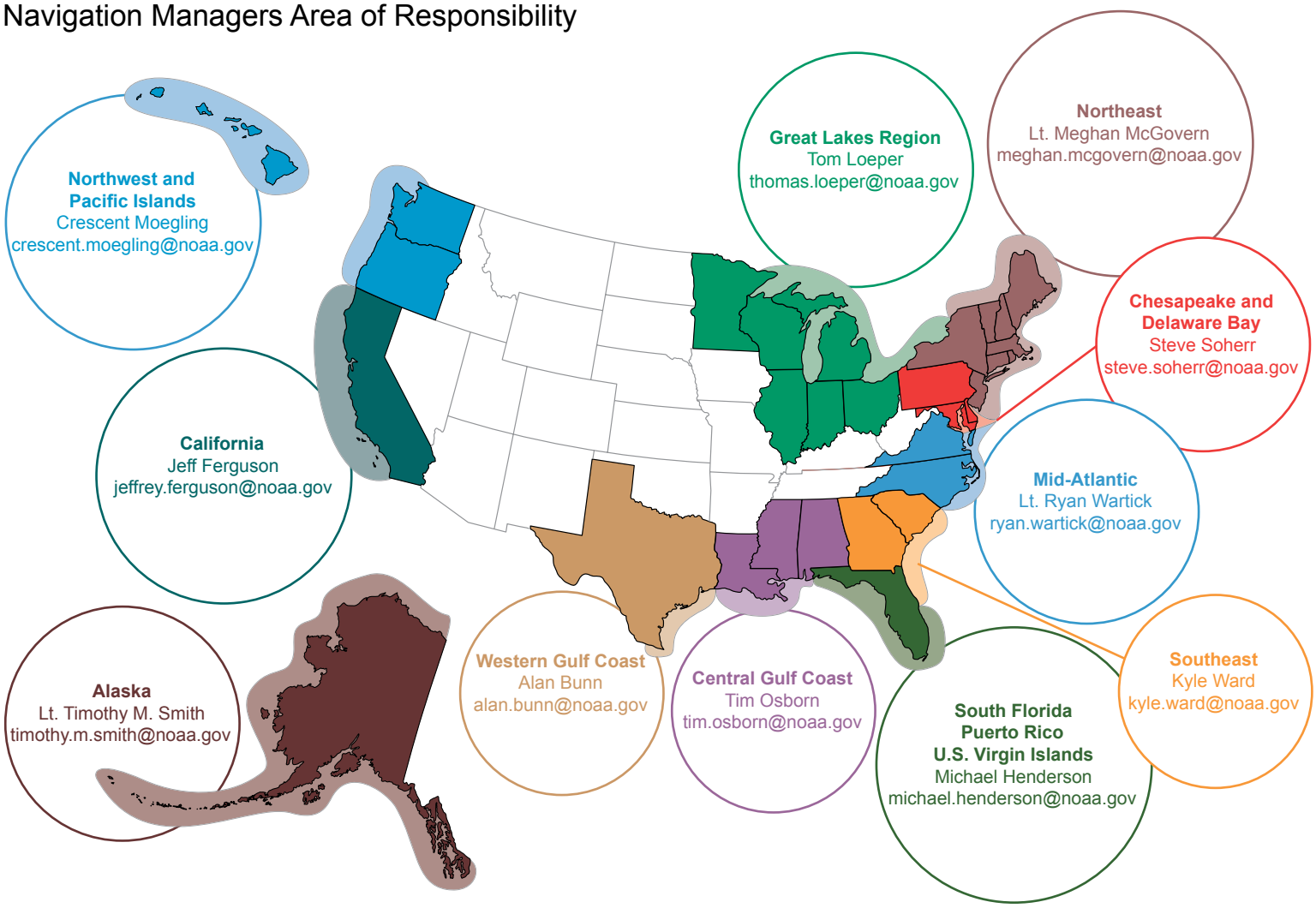
Currents.–In the S end of San Juan Channel, between Goose Island and Deadman Island, the average current velocity is 2.6 knots on the flood and ebb, however, maximum flood currents of 5 knots or more cause severe rips and eddies. Daily current predictions for this location may be obtained from the Tidal Current Tables.

Friday Harbor is a **customs port of entry**. The customs office is about 75 yards W of the port's office, at the yacht club building. The customs officer also performs **immigration** and **agricultural quarantine** inspections.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Seattle	Commander 13th CG District Seattle, WA	(206) 220-7001

Navigation Managers Area of Responsibility

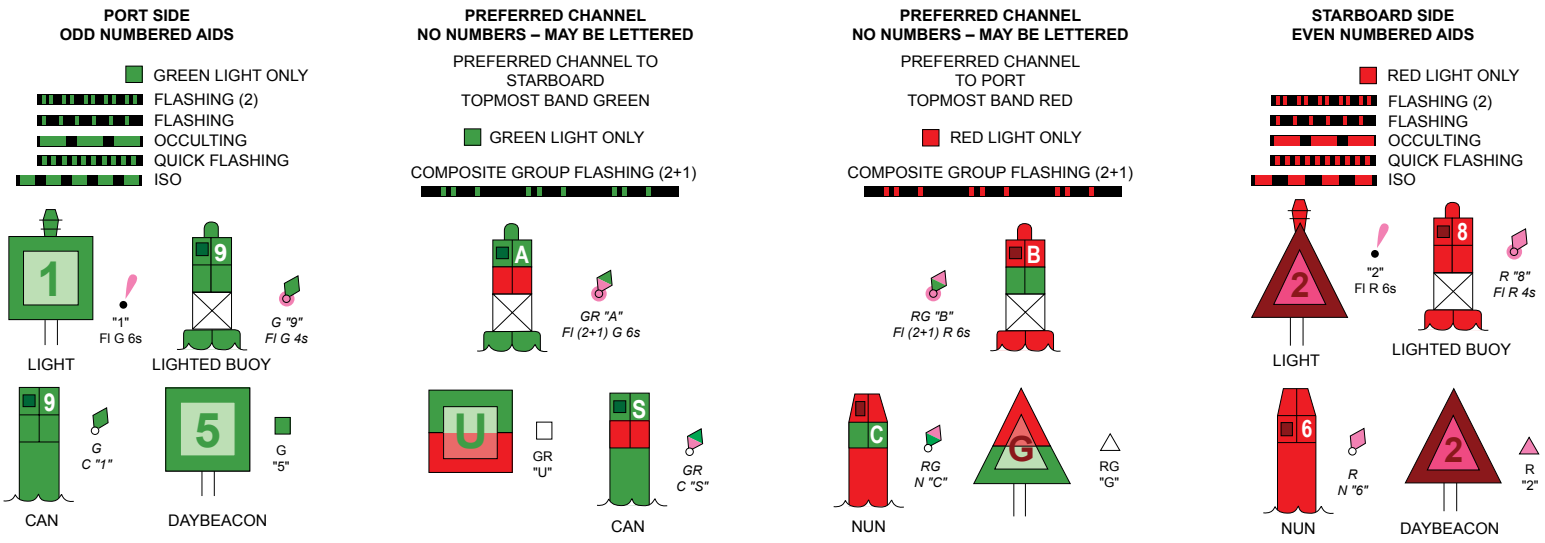


NOAA's navigation managers serve as ambassadors to the maritime community. They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit *nauticalcharts.noaa.gov/service/navmanagers*

To make suggestions or ask questions online, go to *nauticalcharts.noaa.gov/inquiry*.
To report a chart discrepancy, please use *ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx*.

Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers

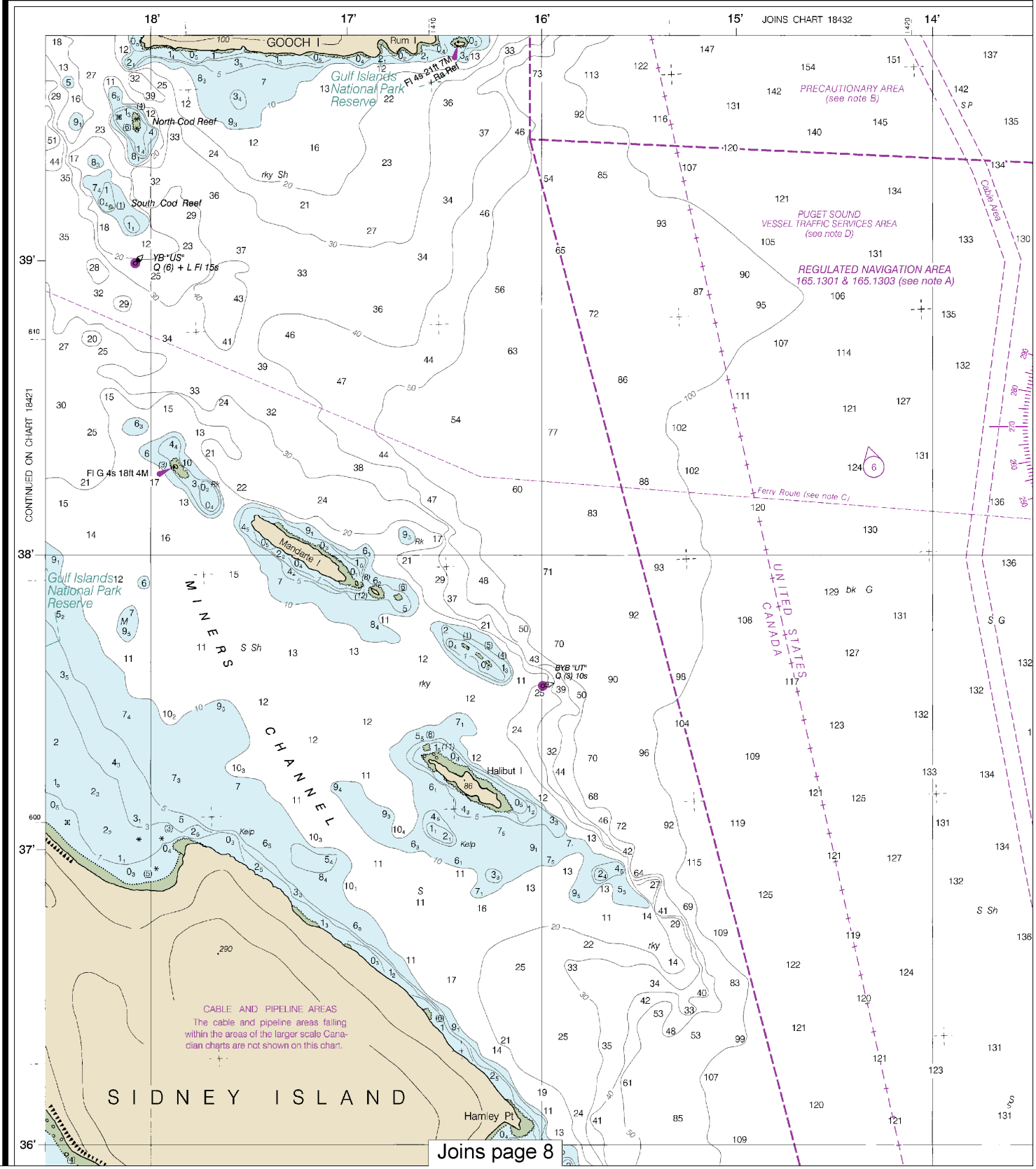


For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at *http://www.navcen.uscg.gov*

SCALE 1:25,000
Nautical Miles
1 ½ 0 1
Yards
1000 0 1000 2000
Meters
1000 0 1000 2000

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

18433



Joins page 8

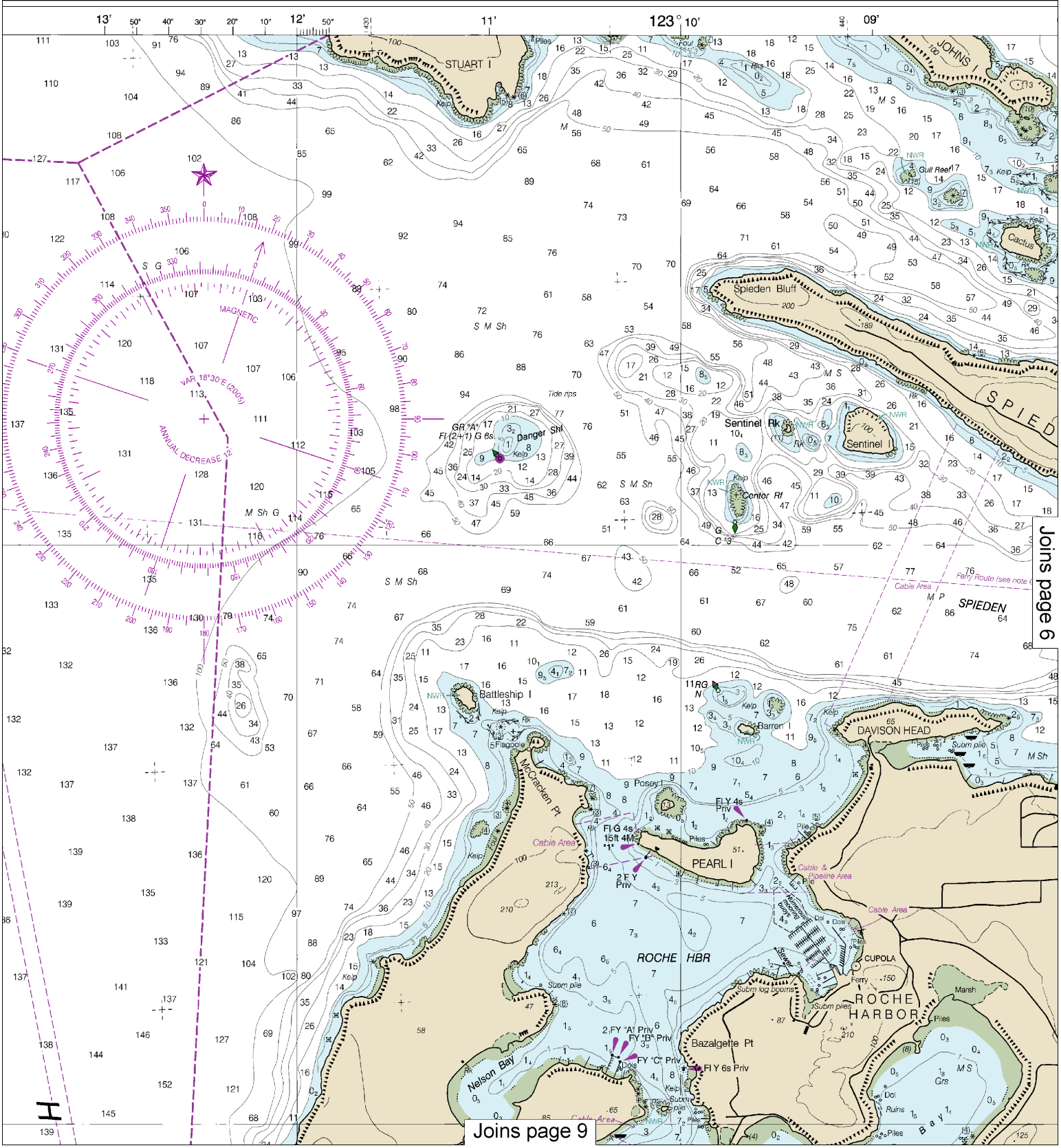
4

Note: Chart grid lines are aligned with true north.

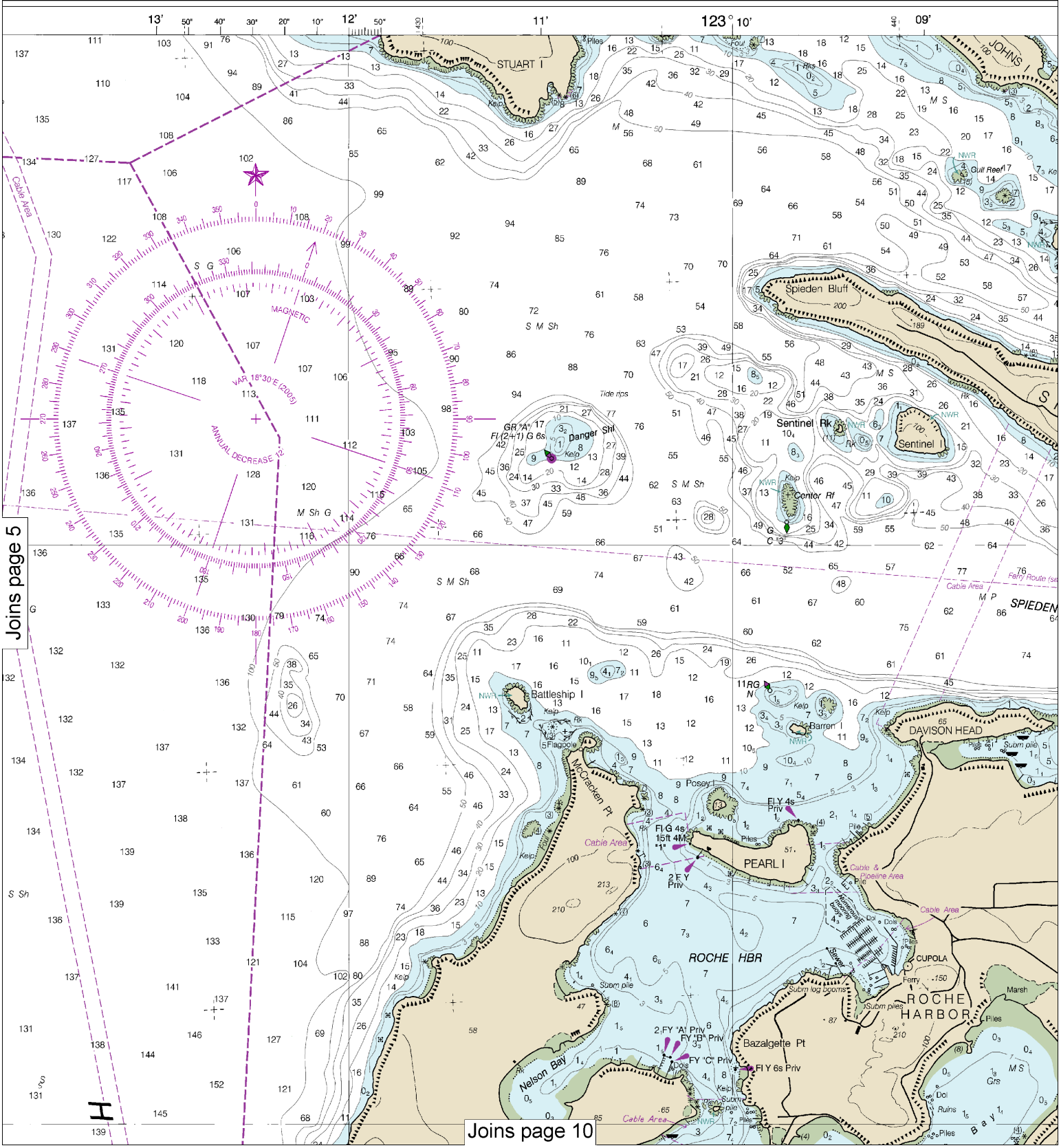
Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1
Yards
1000 0 1000 2000

1st Ed., Aug. 1981 KAPP 1686



This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:33333. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.



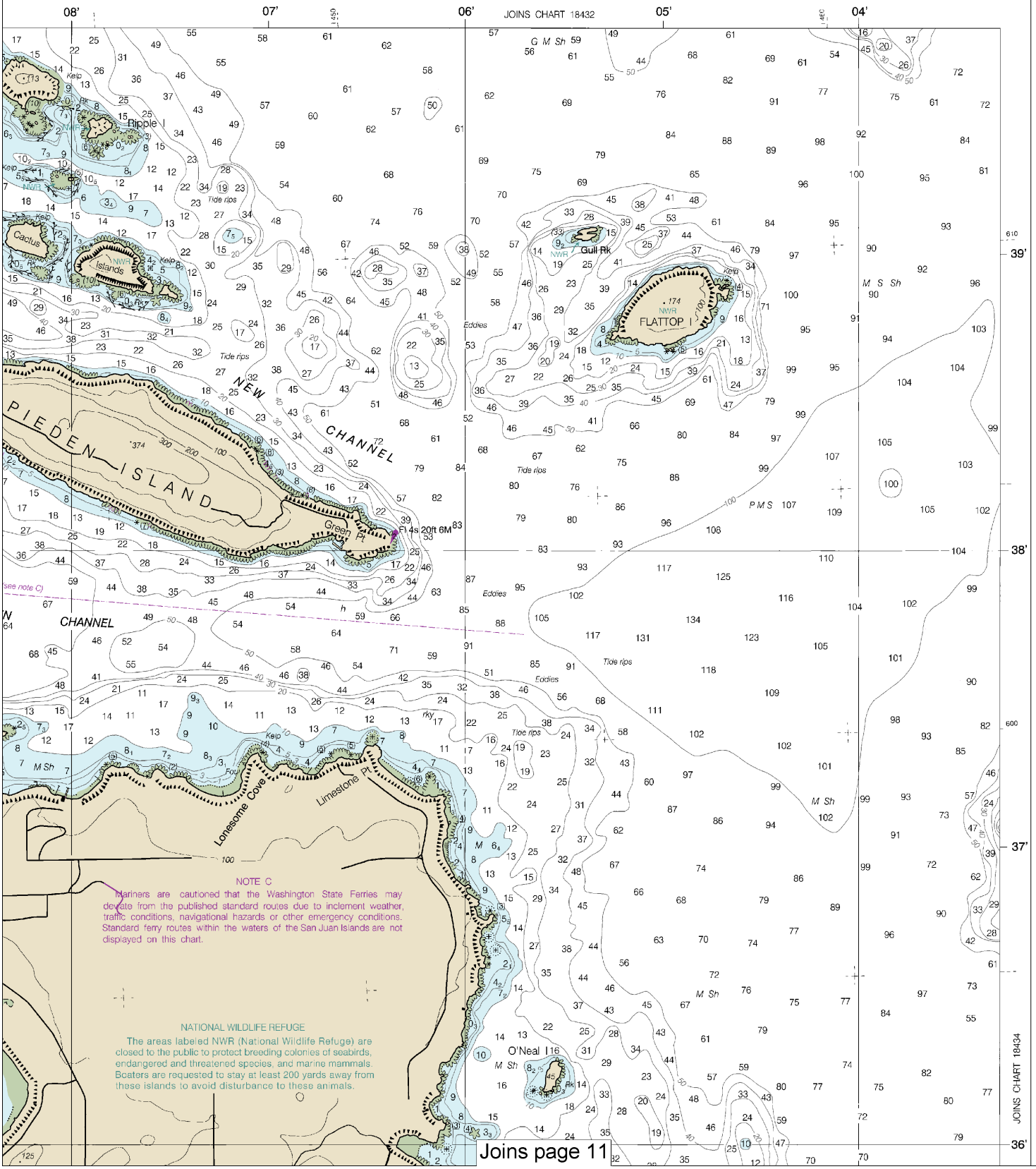
6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

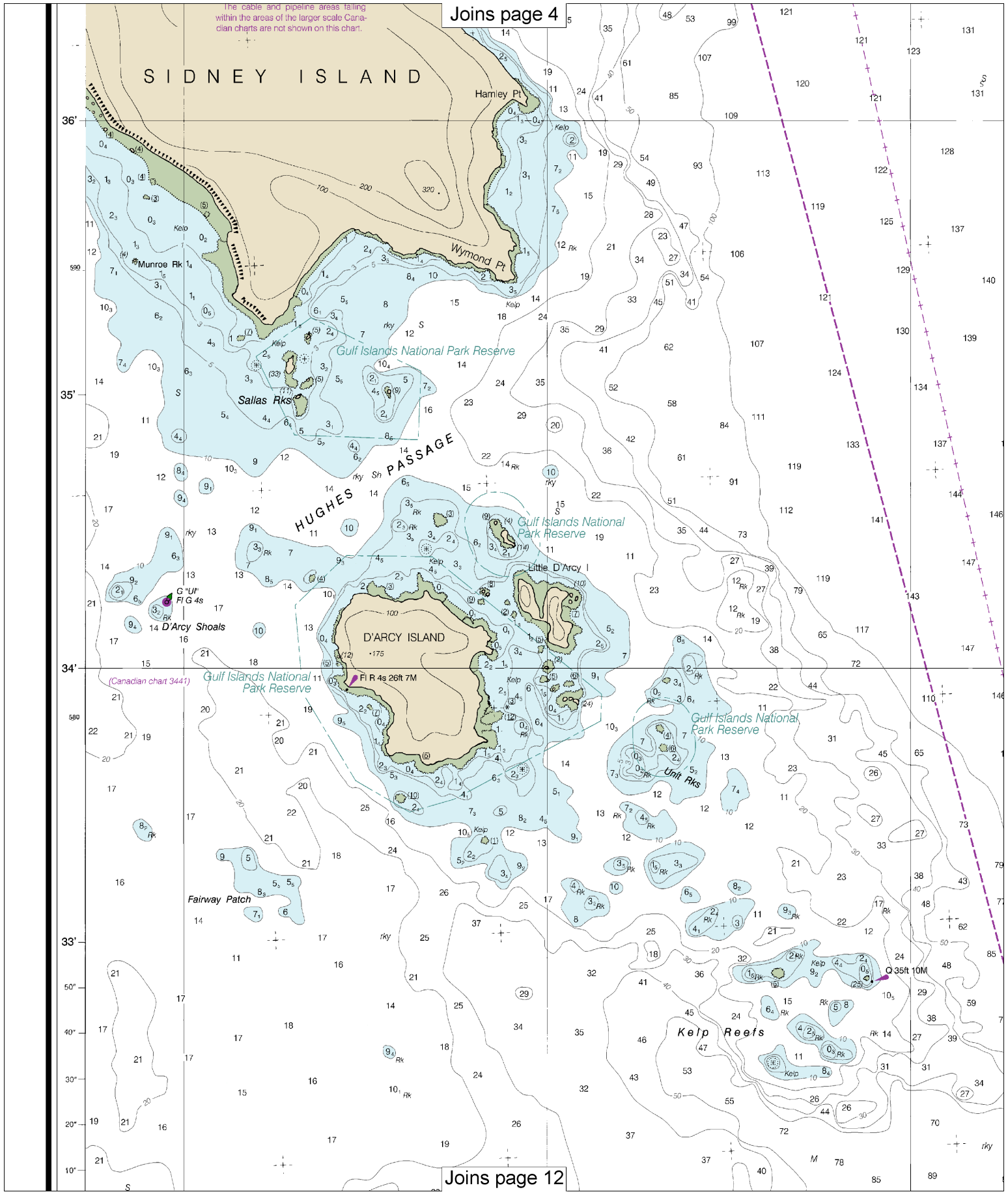
Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000



Joins page 11

6th Ed., Apr. 2005. Last Correction: 7/13/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)



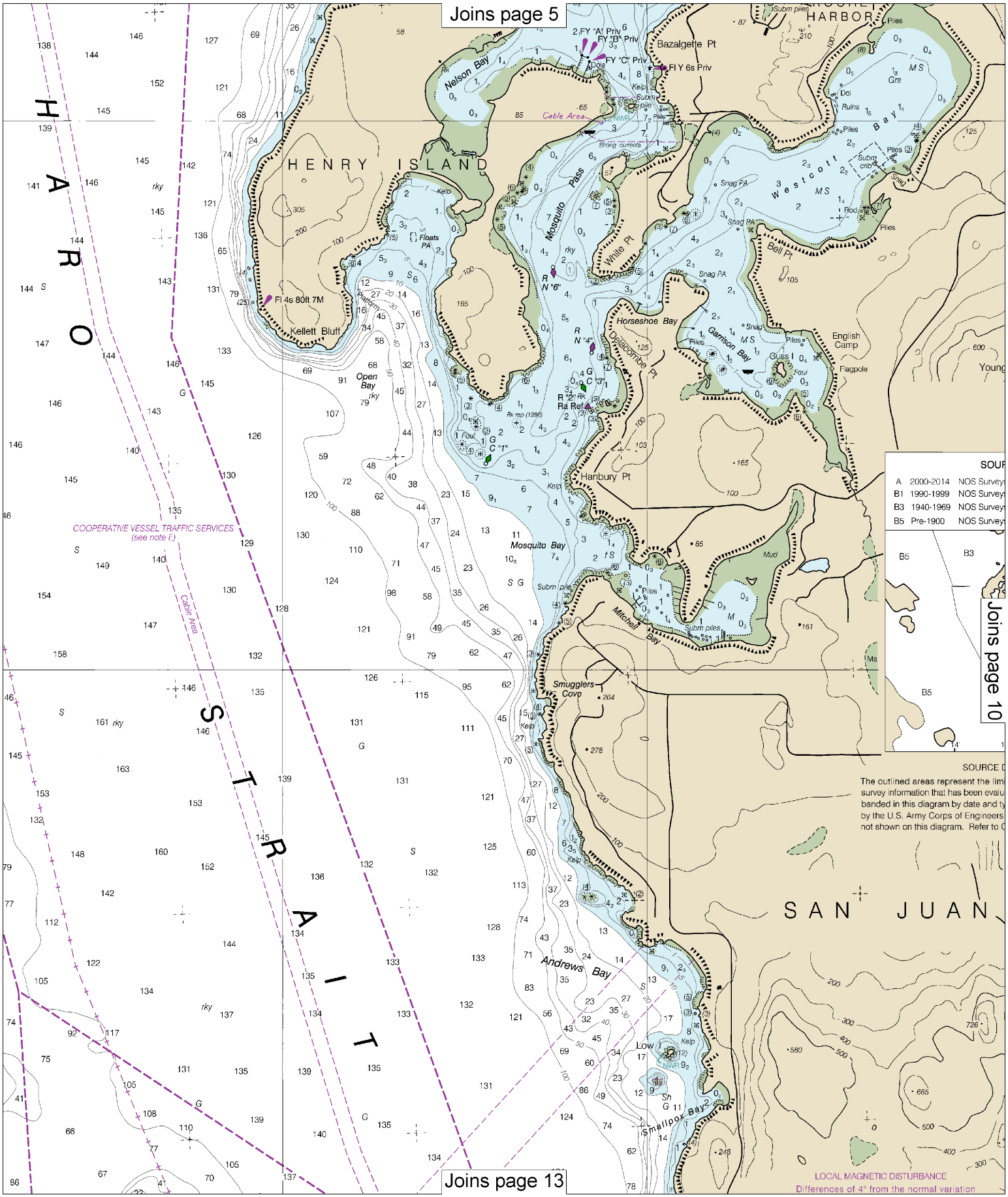
8

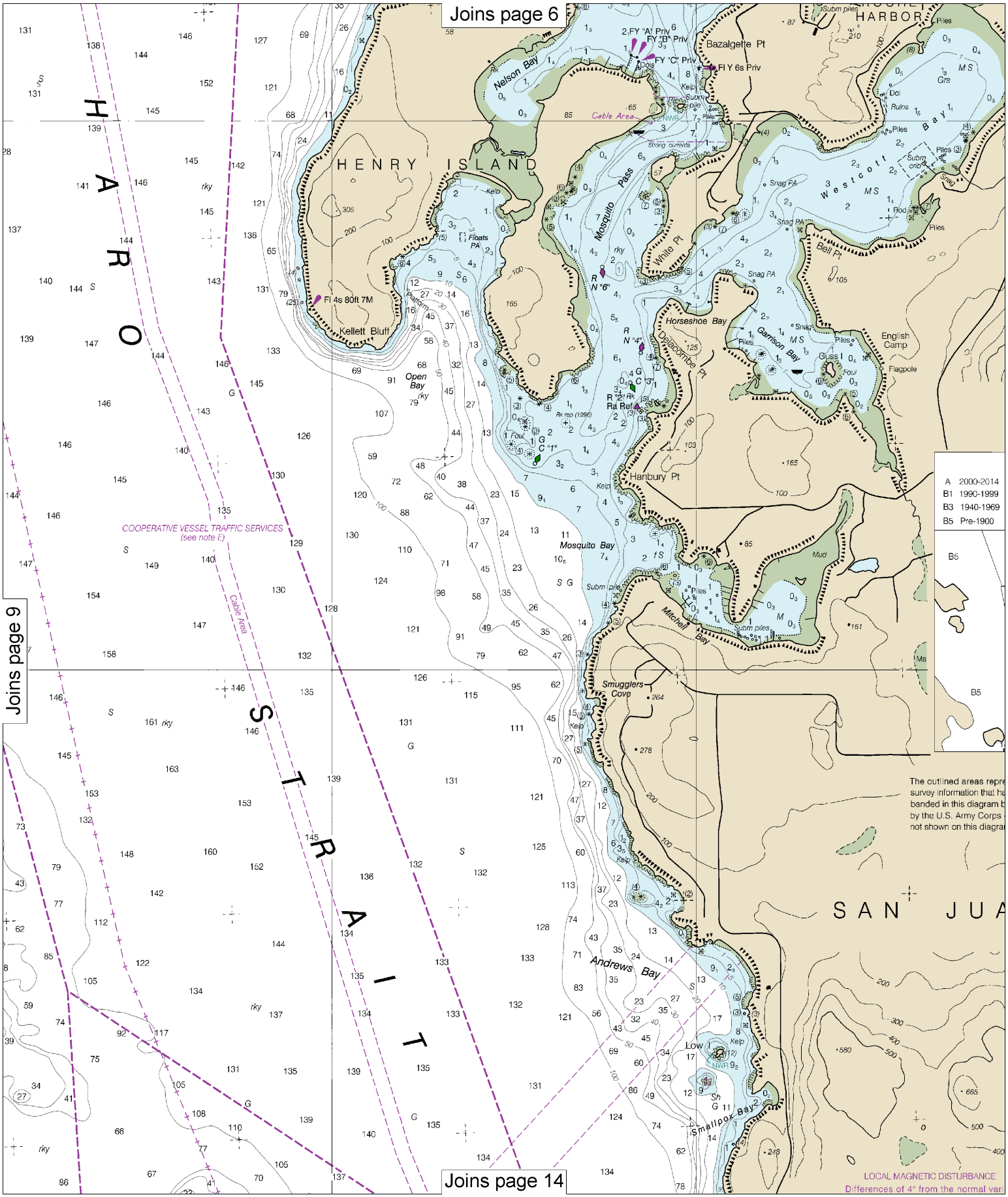
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000


Joins page 5
HARO STRAIT
HENRY ISLAND
SAN JUAN
Nelson Bay
Bazalgette Pt
FY "A" Priv
FY "B" Priv
FY "C" Priv
Fl Y 6s Priv
Cable Area
Strong currents
Mosquito Pass
White Pt
Bell Pt
Westcott Bay
Kellett Bluff
Fl 4s 80ft 7M
Open Bay
Horseshoe Bay
Garrison Bay
English Camp
Flagpole
Depaconbe Pt
Hanbury Pt
Mosquito Bay
Mitchell Bay
Smugglers Cove
Andrews Bay
Low
Smallpox Bay
COOPERATIVE VESSEL TRAFFIC SERVICES
(see note E)
Joins page 10
Joins page 13
LOCAL MAGNETIC DISTURBANCE
Differences of 4° from the normal variation



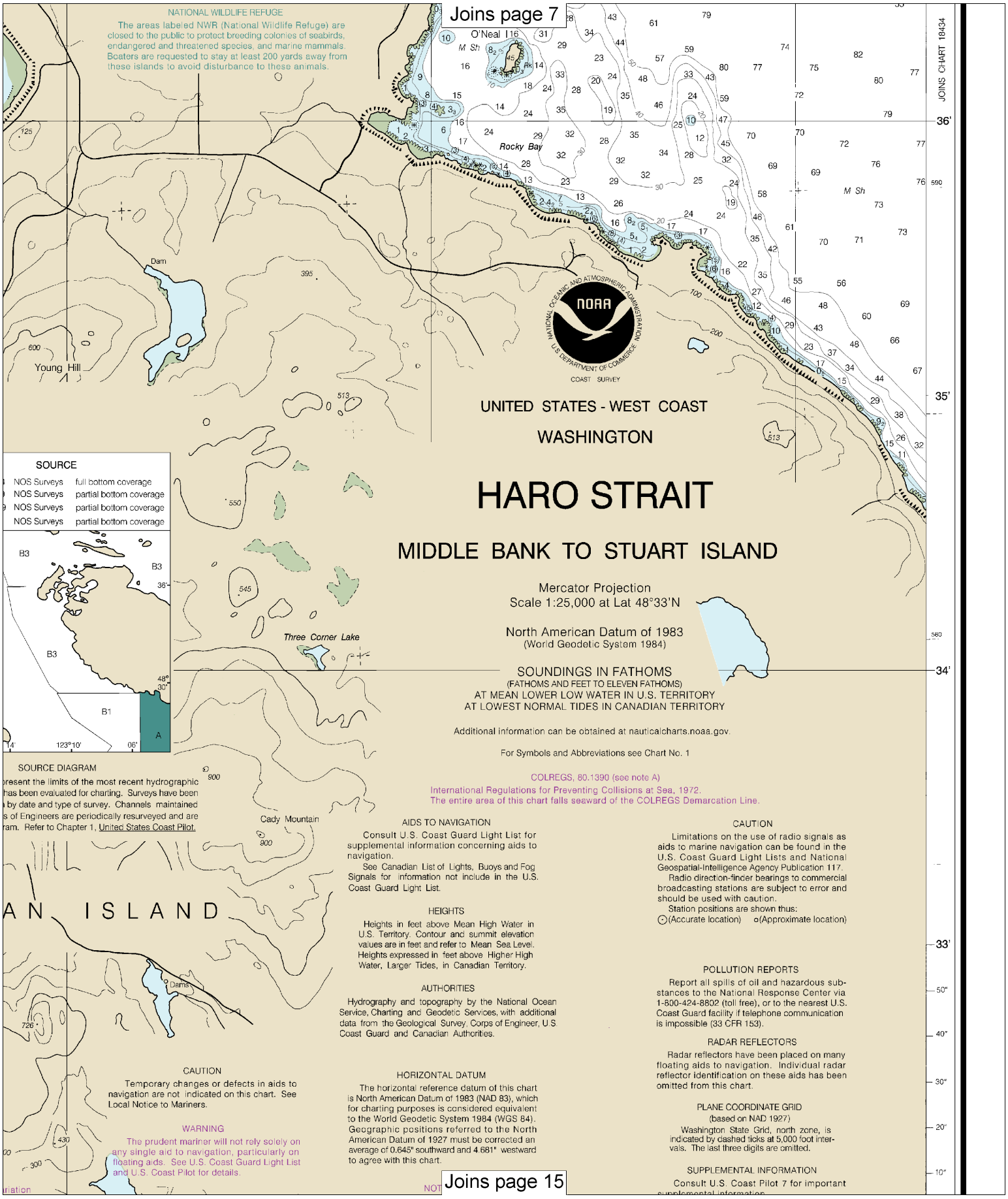
10

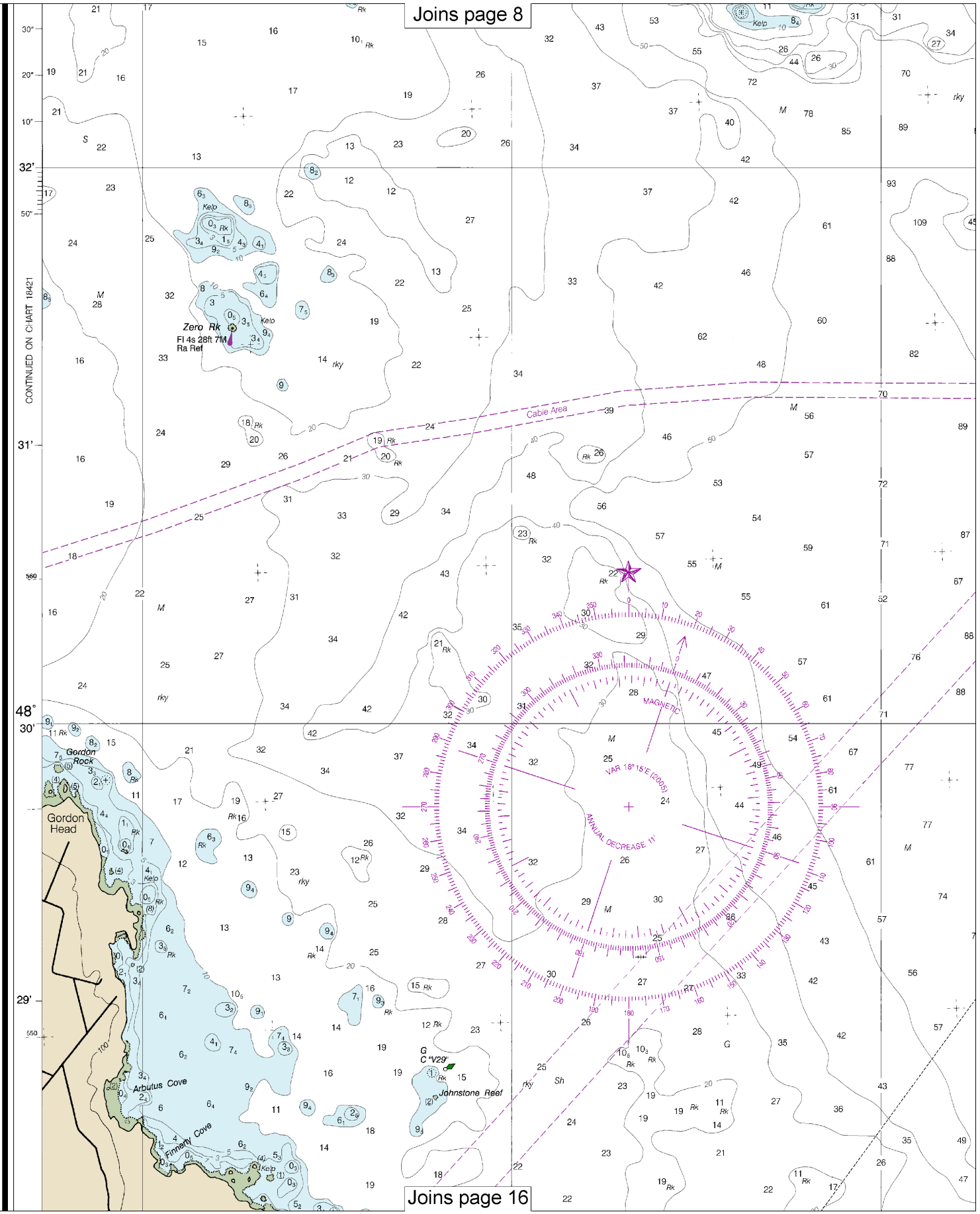
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles: 1 ½ 0 1

Yards: 1000 0 1000 2000


NATIONAL WILDLIFE REFUGE
The areas labeled NWR (National Wildlife Refuge) are closed to the public to protect breeding colonies of seabirds, endangered and threatened species, and marine mammals. Boaters are requested to stay at least 200 yards away from these islands to avoid disturbance to these animals.
Joins page 7
O'Neal I
M Sh
Rk
Rocky Bay
M Sh
JOINS CHART 18434
36'
35'
34'
33'
Dam
Young Hill
Three Corner Lake
Cady Mountain
AN ISLAND
Dams
NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE
COAST SURVEY
UNITED STATES - WEST COAST
WASHINGTON
HARO STRAIT
MIDDLE BANK TO STUART ISLAND
Mercator Projection
Scale 1:25,000 at Lat 48°33'N
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)
AT MEAN LOWER LOW WATER IN U.S. TERRITORY
AT LOWEST NORMAL TIDES IN CANADIAN TERRITORY
Additional information can be obtained at nauticalcharts.noaa.gov.
For Symbols and Abbreviations see Chart No. 1
COLREGS, 80.1390 (see note A)
International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.
SOURCE
NOS Surveys full bottom coverage
NOS Surveys partial bottom coverage
NOS Surveys partial bottom coverage
NOS Surveys partial bottom coverage
B3
B3
B3
B1
A
123°10'
SOURCE DIAGRAM
AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.
See Canadian List of Lights, Buoys and Fog Signals for information not include in the U.S. Coast Guard Light List.
HEIGHTS
Heights in feet above Mean High Water in U.S. Territory. Contour and summit elevation values are in feet and refer to Mean Sea Level. Heights expressed in feet above Higher High Water, Larger Tides, in Canadian Territory.
AUTHORITIES
Hydrography and topography by the National Ocean Service, Charting and Geodetic Services, with additional data from the Geological Survey, Corps of Engineer, U.S. Coast Guard and Canadian Authorities.
HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.645" southward and 4.681" westward to agree with this chart.
CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.
CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙(Accurate location) o(Approximate location)
POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).
RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.
PLANE COORDINATE GRID
(based on NAD 1927)
Washington State Grid, north zone, is indicated by dashed ticks at 5,000 foot intervals. The last three digits are omitted.
SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 7 for important
Joins page 15



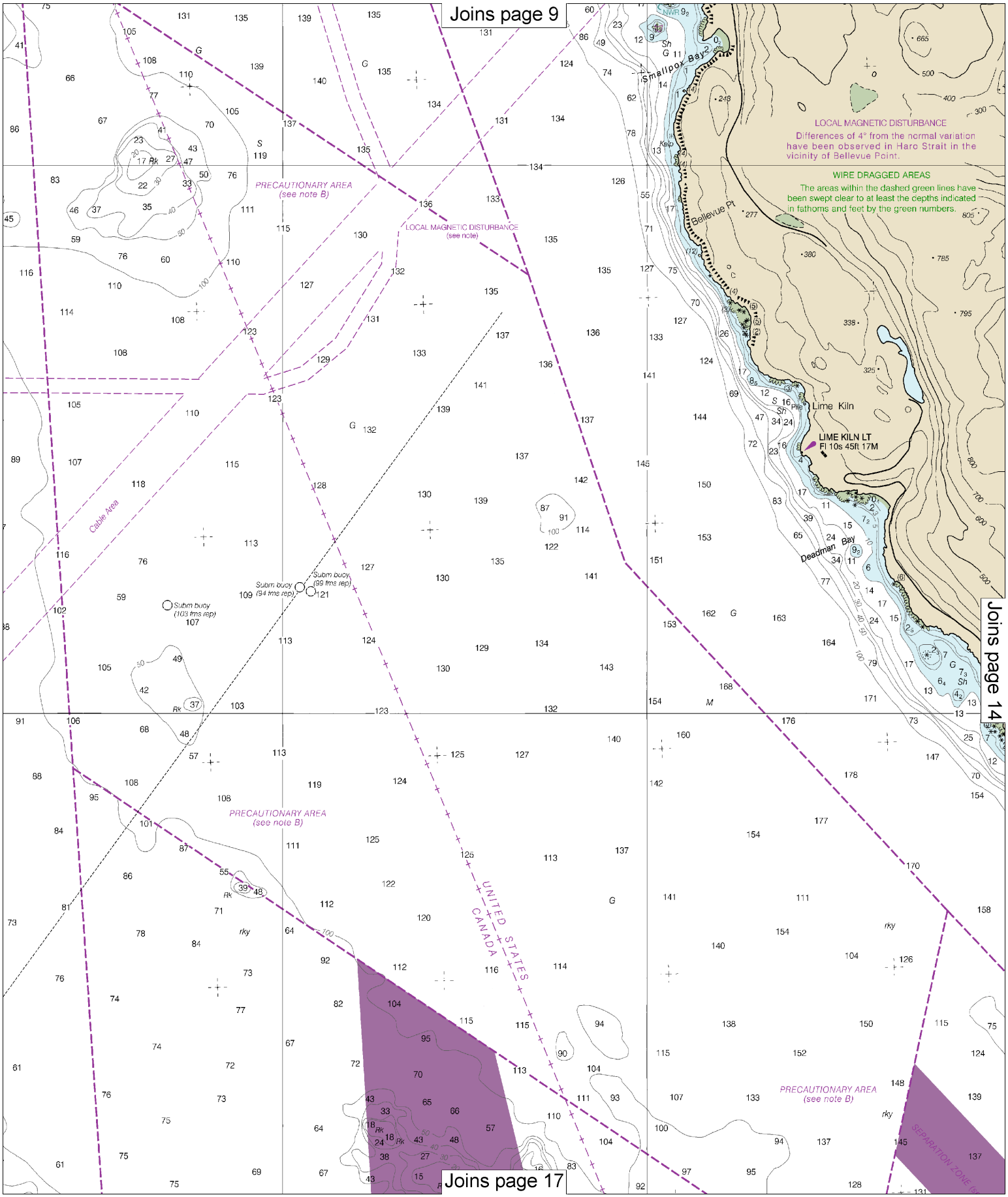
12

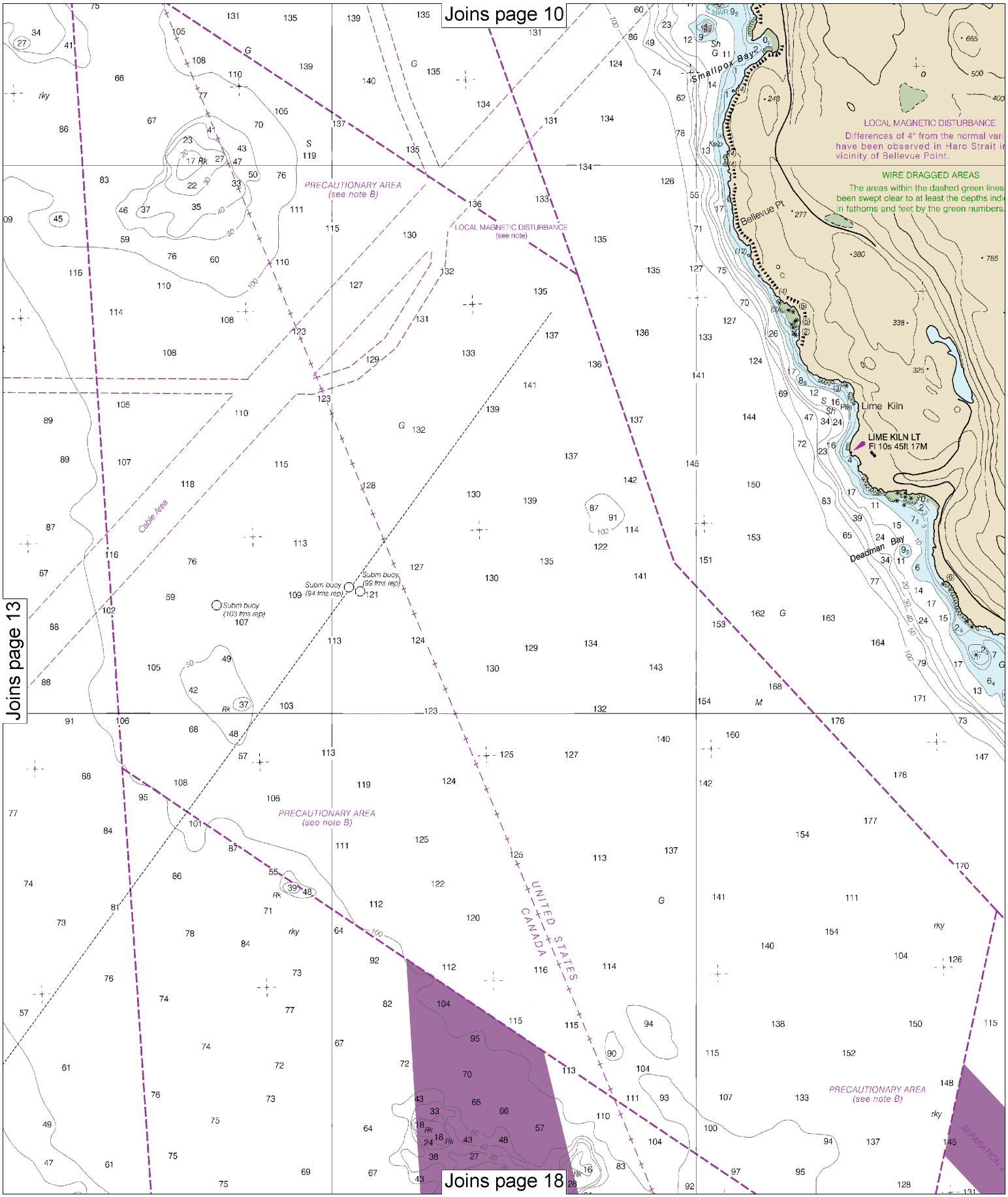
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000


Joins page 9
Joins page 14
Joins page 17
LOCAL MAGNETIC DISTURBANCE
Differences of 4° from the normal variation have been observed in Haro Strait in the vicinity of Bellevue Point.
WIRE DRAGGED AREAS
The areas within the dashed green lines have been swept clear to at least the depths indicated in fathoms and feet by the green numbers.
PRECAUTIONARY AREA (see note B)
LOCAL MAGNETIC DISTURBANCE (see note)
Bellevue Pt
Lime Kiln
LIME KILN LT
Fl 10s 45ft 17M
Deadman Bay
Smallpox Bay
Cable Area
Subm buoy (94 fms rep)
Subm buoy (95 fms rep)
Subm buoy (103 fms rep)
UNITED STATES
CANADA
SEPARATION ZONE



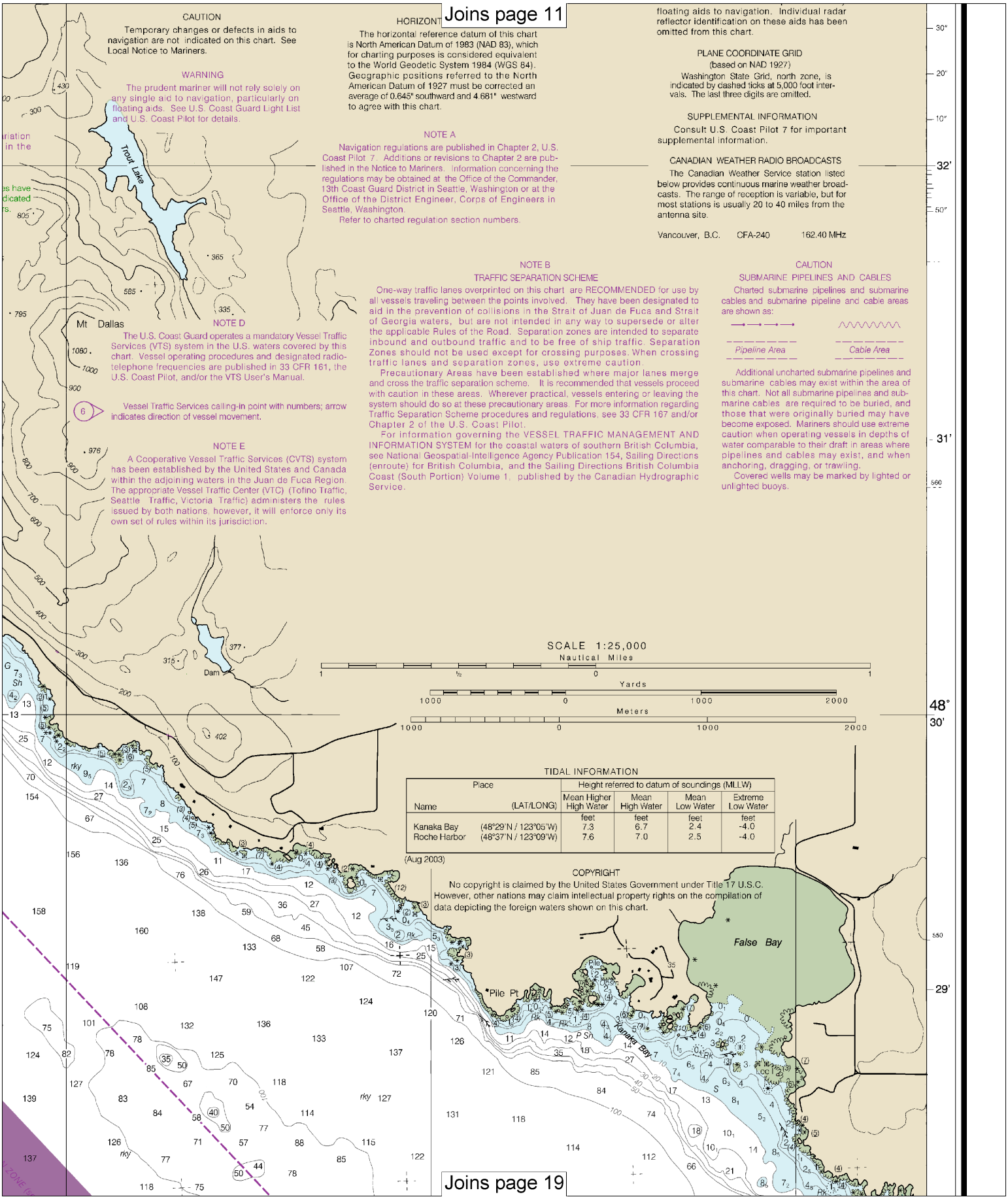
14

Note: Chart grid lines are aligned with true north.

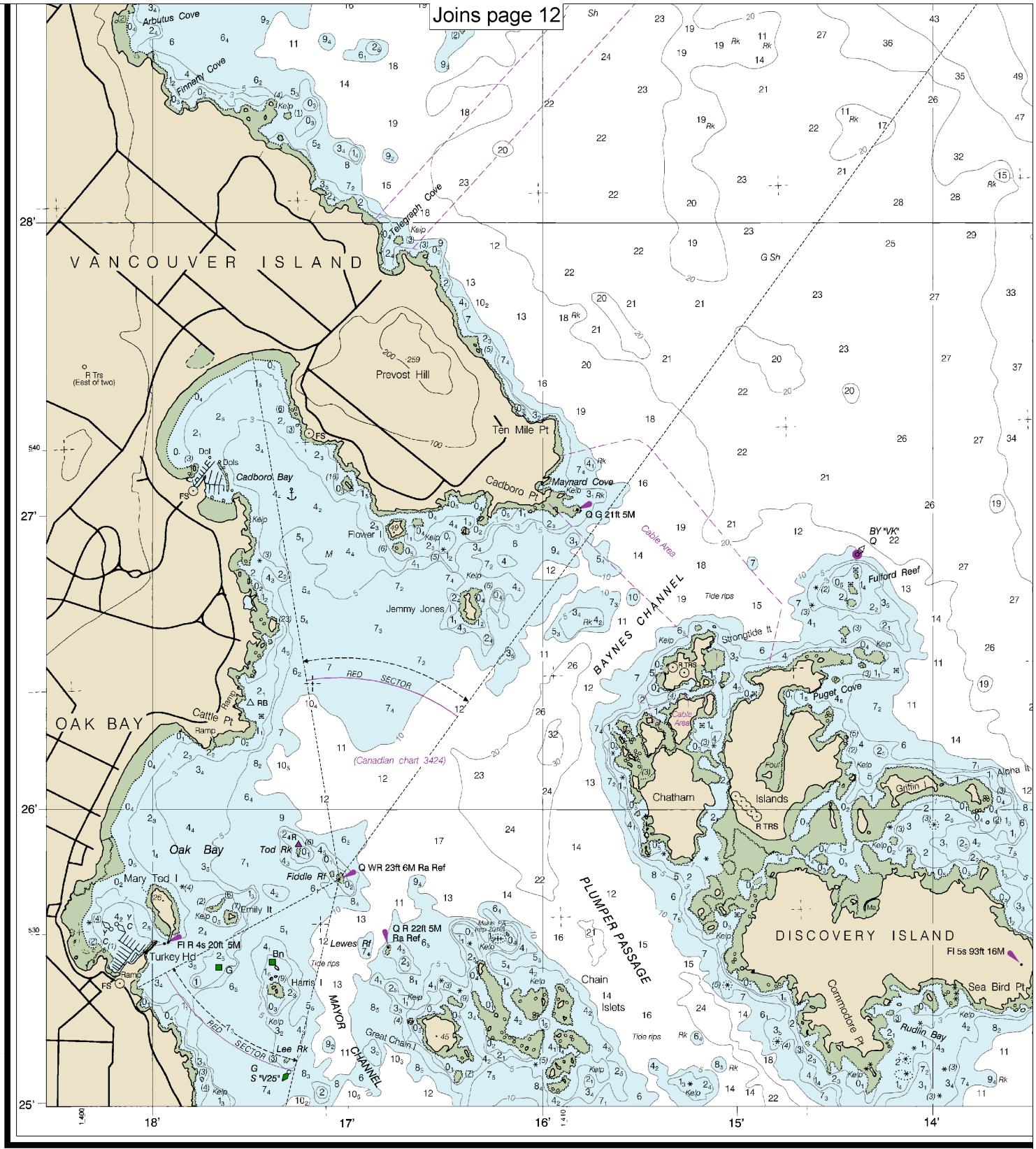
Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles: 1 ½ 0 1

Yards: 1000 0 1000 2000



Place Name	(LAT/LONG)	Height referred to datum of soundings (MLLW) Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Kanaka Bay	(48°29'N / 123°05'W)	7.3	6.7	2.4	-4.0
Roche Harbor	(48°37'N / 123°09'W)	7.6	7.0	2.5	-4.0



18433

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOUND
(FATH

6th Ed., Apr. 2005. Last Correction: 7/13/2016. Cleared through:
LNM: 4816 (11/29/2016), NM: 5016 (12/10/2016), CHS: 1116 (11/25/2016)

16

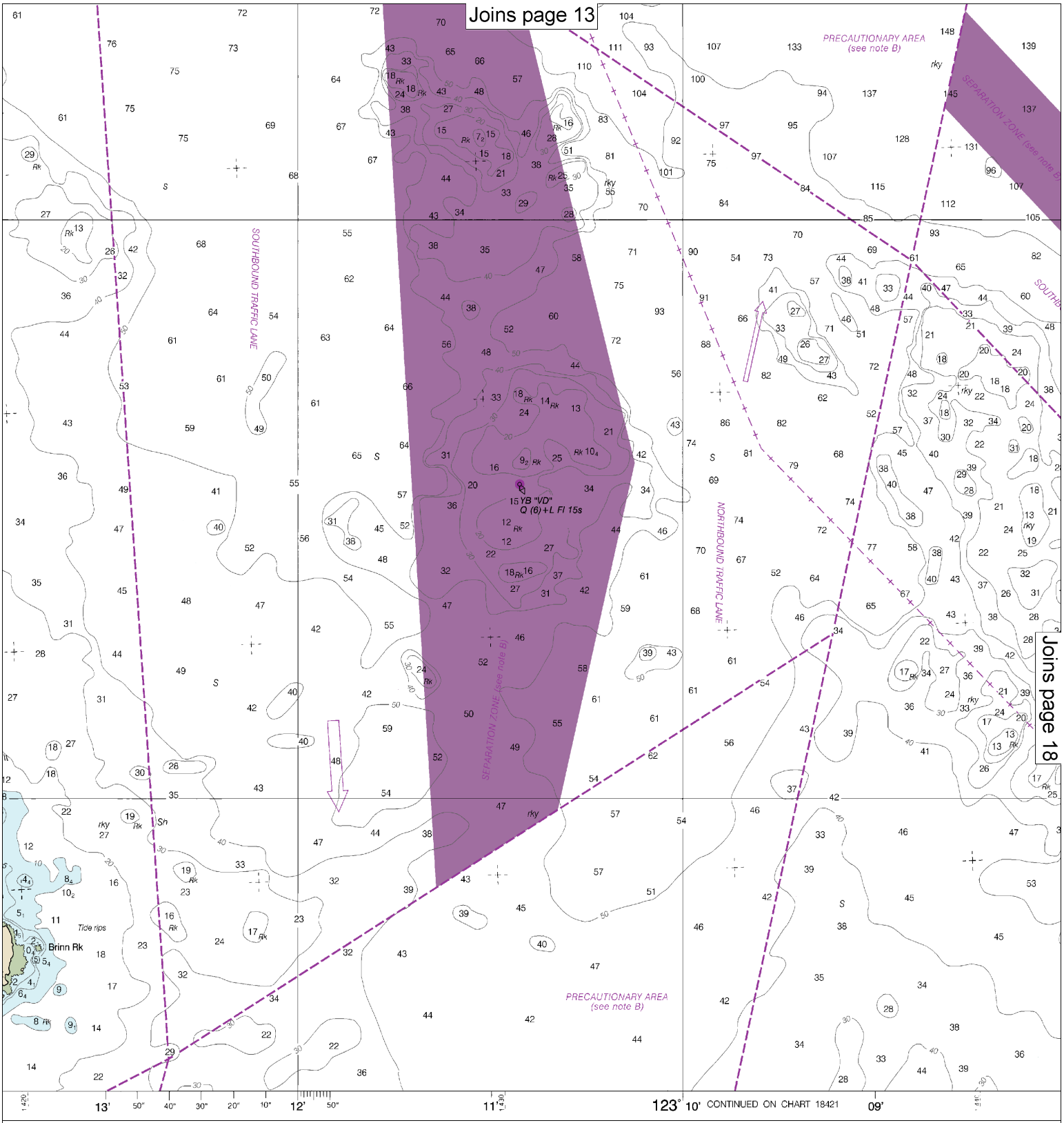
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~

Nautical Miles: 1 ½ 0 1

Yards: 1000 0 1000 2000

See Note on page 5.

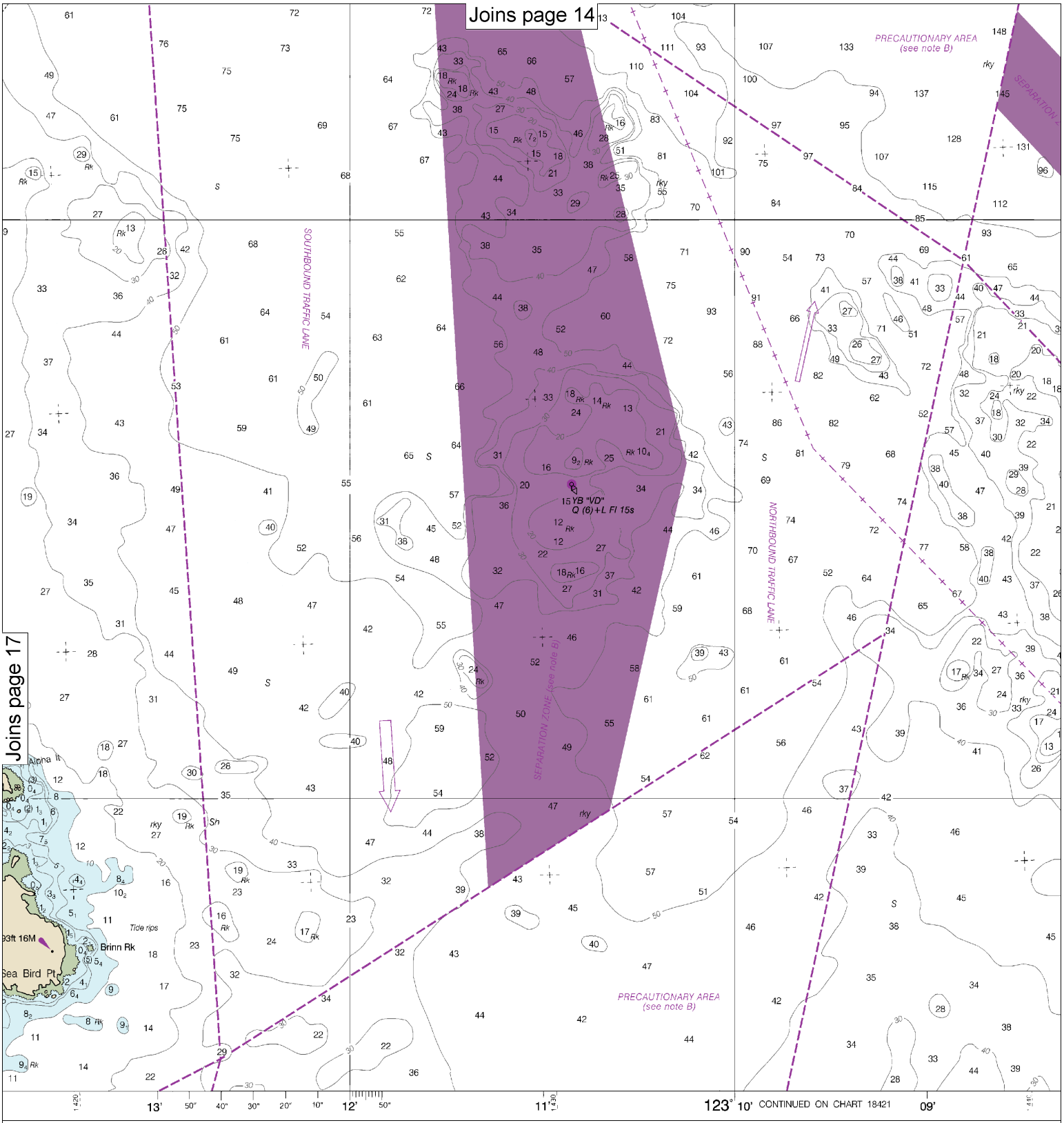


DINGS IN FATHOMS

HOMS AND FEET TO 11 FATHOMS)

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS
FEET
METERS



UNDINGS IN FATHOMS

(FATHOMS AND FEET TO 11 FATHOMS)

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

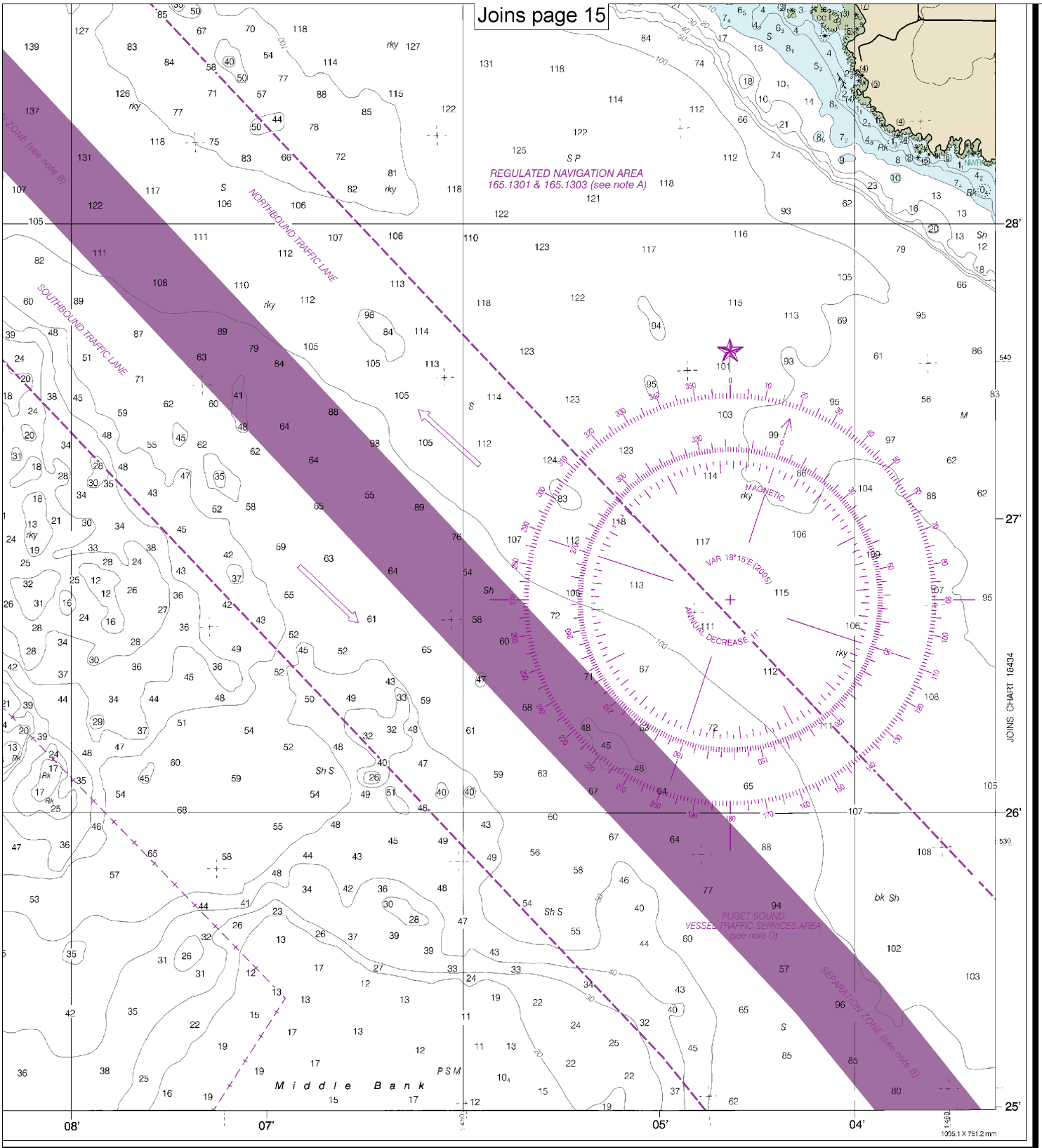
FATHOMS	1	2
FEET	6	12
METERS	1 2 3 4	

Note: Chart grid lines are aligned with true north.

Printed at reduced scale. ~~SCALE 1:25,000~~ See Note on page 5.

Nautical Miles
1 ½ 0 1

Yards
1000 0 1000 2000



Haro Strait, Middle Bank to Stuart Island

SOUNDINGS IN FATHOMS - SCALE 1:25,000

18433

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information	—	**http://www.nauticalcharts.noaa.gov**
Interactive chart catalog	—	**http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml**
Report a chart discrepancy	—	**http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx**
Chart and chart related inquiries and comments	—	**http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs**
Chart updates (LNM and NM corrections)	—	**http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html**
Coast Pilot online	—	**http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm**
Tides and Currents	—	**http://tidesandcurrents.noaa.gov**
Marine Forecasts	—	**http://www.nws.noaa.gov/om/marine/home.htm**
National Data Buoy Center	—	**http://www.ndbc.noaa.gov/**
NowCoast web portal for coastal conditions	—	**http://www.nowcoast.noaa.gov/**
National Weather Service	—	**http://www.weather.gov/**
National Hurrican Center	—	**http://www.nhc.noaa.gov/**
Pacific Tsunami Warning Center	—	**http://ptwc.weather.gov/**
Contact Us	—	**http://www.nauticalcharts.noaa.gov/staff/contact.htm**

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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey The Nation's Chartmaker